

Abstract

Welding method

Two aluminium alloy work-pieces are welded together. Firstly, a portion (2) of each work-piece (1) is prepared, the preparation including the performance of a surface treatment, such as friction stir welding, that results in a region (A) extending from the exterior surface into the work-piece having a grain structure that is finer than the grain structure of the work-piece outside (region C) that region. Then the work-pieces are welded together by means of a fusion welding process, such as electron beam welding, that joins the respective prepared portions (2) of the two work-pieces (1). The preparation of the work-pieces is so performed that said region (A) extends into the work-piece to a depth that exceeds the depth of material (region D) that is caused to melt during the fusion welding process.